

BID DOCUMENTS  
FOR  
Structural Firefighting Gear



1

CITY OF OWOSSO  
301 W. MAIN STREET  
OWOSSO, MICHIGAN 48867

July 23, 2021

NOTICE TO BIDDERS

Structural Firefighter Gear

FOR THE CITY OF OWOSSO, MICHIGAN

Sealed bid proposals will be received by the city of Owosso Structural Firefighting Gear and should be addressed to:

Bid Coordinator  
City of Owosso  
301 W Main St  
Owosso, MI 48867

**Sealed bids will be accepted until 3:00 p.m. August 24, 2021 for Structural Firefighting Gear, at which time bids will be publicly opened and read aloud.**

All bids must be in writing and must contain an original signature by an authorized officer of the firm. Electronic bids (i.e., telephonic, FAX, etc.) are **NOT** acceptable. All bids shall clearly contain on the outside of the **sealed** envelope in which they are submitted:

2

**Structural Firefighting Gear**

Hard copies of the proposal, contract forms and specifications are on file and may be obtained for a fee in accordance with the city's FOIA Policy at the office of the Bid Coordinator, City Hall, 301 West Main Street, Owosso, Michigan 48867. Bid documents are available at no charge on our website at [www.ci.owosso.mi.us](http://www.ci.owosso.mi.us) or on the MITN website at [www.mitn.info](http://www.mitn.info).

The city reserves the right to award by line item, to accept any proposal; or to reject any proposal; to waive irregularities in a proposal; or to negotiate if it appears to be in the best interest of the city of Owosso.

**INQUIRIES/ADDENDUMS**

Addendums will be available on the city's website at [www.ci.owosso.mi.us](http://www.ci.owosso.mi.us) and on the MITN website at [www.mitn.info](http://www.mitn.info).

All inquiries regarding this bid request must be received at least five (5) calendar days prior to the submission and shall be received in, and responded to, in writing, or via FAX at 989-725-0528 or by e-mail to Kevin Lenkart at [kevin.lenkart@ci.owosso.mi.us](mailto:kevin.lenkart@ci.owosso.mi.us)

## INSTRUCTIONS TO BIDDERS

1. Each proposal must be signed by the bidder with his usual signature. Bids by partnerships should be signed with the partnership name by one of the members of the partnership or by an authorized representative, followed by the signature and title of the person signing. Proposals by corporations must be signed with the name of the corporation, followed by the signature and designation of the president, vice-president or person authorized to bind it in the matter. **Any paperwork not filled out properly or signed will cause the bid to be considered non-responsive and shall be rejected by the city.**
2. Proposals, to receive consideration, must be received prior to the specified time of opening and reading as designated in the invitation.
3. Bidders are requested to use the proposal form furnished by the city when submitting their proposals. Envelopes must be **sealed** when submitted and clearly marked on the outside indicating the name of the bid.
4. Proposals having and erasures or corrections thereon may be rejected unless explained or noted over the signature of the bidder.
5. References in the specifications or description of materials, supplies, equipment, or services to a particular trade name, manufacturer's catalog, or model number are made for descriptive purposes to guide the bidder in interpreting the type of materials or supplies, equipment, or nature of the work desired. They should not be construed as excluding proposals on equivalent types of materials, supplies, and equipment or for performing the work in a manner other than specified. However, the bidders' attention is called to General Condition six (6).
6. Proposals should be mailed or delivered to:  
Bid Coordinator  
City of Owosso  
301 W Main St  
Owosso, MI 48867
7. Special conditions included in this inquiry shall take precedence over any conditions listed under General Conditions or Instructions to Bidders.
8. Bodily injury, property damage and worker's compensation – The contractor, prior to execution of the contract, shall file with the city copies of completed certificates of insurance naming the city of Owosso as an additional insured party, as evidence that the contractor carries adequate insurance satisfactory to the city.

9. The city of Owosso has a local preference policy for the purchase of goods and services. The policy in part states: *A business located within the city limits and paying real or personal property taxes to the city of Owosso will be granted a six percent (6%) bid advantage or \$2,500, whichever is less, over a business located outside Shiawassee County. A business located outside the city limits but within Shiawassee County and paying property taxes to the county will be granted a three percent (3%) bid advantage or \$2,500, whichever is less, over a business located outside Shiawassee County. The preference also applies to subcontractors performing twenty-five percent (25%) or more of the work of a general contract.*



On behalf of \_\_\_\_\_, I hereby submit this proposal for your consideration. The undersigned acknowledges that this proposal is subject to the General Conditions and the General Specifications included in the contract documents. In submitting this proposal, it is understood that the right is reserved by the CITY to reject any and all proposals, and waive any irregularities in the bidding process. The CITY may award this contract based on any combination of the total bid and/or alternates.

Dated and signed at \_\_\_\_\_ State of \_\_\_\_\_  
This \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
Bidder

Witness:  
\_\_\_\_\_

By/s/

\_\_\_\_\_  
Business Address

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

\_\_\_\_\_  
Telephone Number

## GENERAL CONDITIONS

### 1. LOCAL PREFERENCE POLICY

The city of Owosso has a local preference policy for the purchase of goods and services. The policy in part states: *A business located within the city limits and paying real or personal property taxes to the city of Owosso will be granted a 6% bid advantage or \$2,500, whichever is less, over a business located outside Shiawassee County. A business located outside the city limits but within Shiawassee County and paying property taxes to the county will be granted a 3% bid advantage or \$2,500, whichever is less, over a business located outside Shiawassee County. The preference also applies to subcontractors performing 25% or more of the work of a general contract.*

### 2. BID ACCEPTANCE

The city reserves the right to reject any or all proposals. Unless otherwise specified, the city reserves the right to accept any item in the proposal. In case of error in extending the total amount of the bid, the unit prices shall govern.

### 3. PAYMENT

Unless otherwise stated by the bidder, time, concerning discount offered, will be computed from date of delivery and acceptance at destination or from date correct bill or claim voucher properly certified by the contractor is received. When so stated herein, partial payments, based on a certified approved estimate by the city of materials, supplies or equipment delivered or work done, may be made upon presentation of a properly-executed claim voucher. The final payment will be made by the city when materials, supplies, equipment or the work done have been fully delivered or completed to the full satisfaction of the city.

### 4. BID DEFAULT

In case of default by the bidder or contractor, the city of Owosso may procure the articles or services from other sources and hold the bidder or contractor responsible for any excess cost occasioned thereby.

### 5. UNIT PRICES

Prices should be stated in units of quantity specified.

### 6. QUOTED PRICES

Unless otherwise stated by the bidder, prices quoted will be considered as being based on delivery to a designated destination and to include all charges for packing, crating, containers, shipping, etc., and being in strict accordance with specifications and standards as shown.

### 7. SUBSTITUTIONS

Wherever a reference is made in the specifications or description of the materials, supplies, equipment, or services required, to a particular trade name, manufacturer's catalog, or model number, the bidder, if awarded a contract or order, will be required to furnish the particular item referred to in strict accordance with the specifications or description unless a departure or

substitution is clearly noted and described in the proposal.

#### 8. HOLD CITY HARMLESS

The bidder, if awarded an order or contract, agrees to protect, defend, and save the city harmless against any demand for payment for the use of any patented material, process, article, or device that may enter into the manufacture, construction, or form a part of the work covered by either order or contract. Bidder further agrees to indemnify and save the city harmless from suits or action of every nature and description brought against it, for or on account of any injuries or damages received or sustained by any party or parties, by or from any of the acts of the contractor, his employees, subcontractors, or agents.

#### 9. COMPETITIVE BIDDING STATUTES

The laws of the state of Michigan, the charter and ordinances of the city of Owosso, as far as they apply to the laws of competitive bidding, contracts and purchases, are made a part hereof.

#### 10. SAMPLES

Samples, when requested, must be furnished free of expense to the city and, if not destroyed, will upon request be returned at the bidder's expense.

#### 11. EQUAL EMPLOYMENT OPPORTUNITY AND OTHER CLAUSES

The contractor shall agree not to discriminate against any employee or applicant for employment because of age, race, religion, color, handicap, sex, physical condition, developmental disability as defined by Michigan Compiled Statutes, or national origin. This provision shall include but not be limited to the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rate of pay or other forms of compensation, and selection for training including apprenticeship. The contractor further agrees to take affirmative action to ensure equal employment opportunities for persons with disabilities. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provision of the non-discrimination clause.



## LOCAL PREFERENCE POLICY

The following affidavit should be completed if a bidder is located within Shiawassee County or intends to sub-contract more than twenty-five percent (25%) to a Shiawassee County based business: The city of Owosso has a local preference policy for the purchase of goods and services as recorded in the city ordinance in section 2-348. "Lowest qualified bidder" defined.

1. The term "lowest qualified bidder," as used in this division, shall mean the lowest bidder having qualifications to perform the work which are satisfactory to the council. The lowest bidder shall be determined based on an adjusted bid tabulation which shall be prepared in the following manner:  
To the bid of any bidder which is neither a city-based business nor a county-based business shall be added an amount equal to six (6) percent of the bid or two thousand five hundred dollars (\$2,500.00), whichever is less.
2. To the bid of any bidder which is a county-based business shall be added an amount equal to three (3) percent of the bid or two thousand five hundred dollars (\$2,500.00), whichever is less; provided, however, that if no bid is received from a city-based business, no additional amount shall be added to the bid of a county-based business.
3. "Owosso-based business" shall be interpreted to mean a business registered with the county clerk or a corporation registered with the state having a business address within the city limits which pays real and/or personal property taxes levied by the city. The term "county-based business" shall be interpreted to mean a business other than a city-based business registered with the county clerk or a corporation registered with the state having a business address within the county which pays real and/or personal property taxes levied by the county.
4. If twenty-five (25) percent or more of a contract for construction or other services is to be subcontracted by a city-based business bidder to a non-city-based business or businesses, or by a county-based business bidder to a non-county-based business or businesses, the adjusted bid shall be calculated by applying the provisions of this section separately to each portion of the contract based on the status of the contractor or subcontractor performing that portion of the contract as a city-based or county-based business.

**AFFIDAVIT**

In accordance with Section 2-348 of the Owosso city code, the bid from a business located in Shiawassee County shall be adjusted to reflect a preference. In order for the city to calculate the adjustment, the bidder hereby deposes and states that their business address is registered, and is currently paying real and/or personal property taxes in Shiawassee County at the following address:

---

**Registered business address**

The affiant further deposes and states that a sub-contract with a business registered, and paying real and/or personal property taxes in Shiawassee County will be executed for a percentage equal to or greater than twenty-five percent (25%) as stated below:

---

**Business name and address of sub-contractor**

---

**Percentage of contract**

---

**Authorized signature**

---

**Title**

---

**Company name**

---

**Date**

**SIGNATURE PAGE AND LEGAL STATUS**

The undersigned certifies that he is an official legally authorized to bind his firm and to enter into a contract should the city accept this proposal.

Bid proposal by \_\_\_\_\_  
(Name of Firm)

Legal status of bidder. Please check the appropriate box and **USE CORRECT LEGAL NAME.**

A. Corporation \_\_\_\_ ; State of Incorporation \_\_\_\_\_

B. Partnership \_\_\_\_ ; List of names \_\_\_\_\_

C. DBA \_\_\_\_ ; State full name \_\_\_\_\_ DBA

D. Other \_\_\_\_ ; Explain \_\_\_\_\_

11

Signature of Bidder \_\_\_\_\_ Title \_\_\_\_\_  
(Authorized Signature)

Signature of Bidder \_\_\_\_\_ Title \_\_\_\_\_  
(Authorized Signature)

Address \_\_\_\_\_ City \_\_\_\_\_ Zip \_\_\_\_\_

Telephone ( ) \_\_\_\_\_

Signed this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_.

Bidder acknowledges receipt of the following Addenda:

ADDENDUM NO.	BIDDER'S INITIALS
_____	_____
_____	_____
_____	_____

## W-9 INFORMATION FOR LEGAL STATUS

**Sole proprietor.** Enter your individual name as shown on your income tax return on the “Name” line. You may enter your business, trade, or “doing business as (DBA)” name on the “Business name/disregarded entity name” line.

**Partnership, C Corporation, or S Corporation.** Enter the entity's name on the “Name” line and any business, trade, or “doing business as (DBA) name” on the “Business name/disregarded entity name” line.

**Disregarded entity.** Enter the owner's name on the “Name” line. The name of the entity entered on the “Name” line should never be a disregarded entity. The name on the “Name” line must be the name shown on the income tax return on which the income will be reported. For example, if a foreign LLC that is treated as a disregarded entity for U.S. federal tax purposes has a domestic owner, the domestic owner's name is required to be provided on the “Name” line. If the direct owner of the entity is also a disregarded entity, enter the first owner that is not disregarded for federal tax purposes. Enter the disregarded entity's name on the “Business name/disregarded entity name” line. If the owner of the disregarded entity is a foreign person, you must complete an appropriate Form W-8.

**Note.** Check the appropriate box for the federal tax classification of the person whose name is entered on the “Name” line (Individual/sole proprietor, Partnership, C Corporation, S Corporation, Trust/estate).

12

**Limited Liability Company (LLC).** If the person identified on the “Name” line is an LLC, check the “Limited liability company” box only and enter the appropriate code for the tax classification in the space provided. If you are an LLC that is treated as a partnership for federal tax purposes, enter “P” for partnership. If you are an LLC that has filed a Form 8832 or a Form 2553 to be taxed as a corporation, enter “C” for C corporation or “S” for S corporation. If you are an LLC that is disregarded as an entity separate from its owner under Regulation section 301.7701-3 (except for employment and excise tax), do not check the LLC box unless the owner of the LLC (required to be identified on the “Name” line) is another LLC that is not disregarded for federal tax purposes. If the LLC is disregarded as an entity separate from its owner, enter the appropriate tax classification of the owner identified on the “Name” line.

**Other entities.** Enter your business name as shown on required federal tax documents on the “Name” line. This name should match the name shown on the charter or other legal document creating the entity. You may enter any business, trade, or DBA name on the “Business name/disregarded entity name” line.

**Request for Taxpayer  
Identification Number and Certification**

**Give Form to the  
requester. Do not  
send to the IRS.**

Print or type See Specific Instructions on page 2.	Name (as shown on your income tax return)	
	Business name/disregarded entity name, if different from above	
	Check appropriate box for federal tax classification: <input type="checkbox"/> Individual/sole proprietor <input type="checkbox"/> C Corporation <input type="checkbox"/> S Corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Trust/estate <input type="checkbox"/> Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=partnership) ▶ _____ <input type="checkbox"/> Exempt payee <input type="checkbox"/> Other (see instructions) ▶ _____	
	Address (number, street, and apt. or suite no.)	Requester's name and address (optional)
	City, state, and ZIP code	
List account number(s) here (optional)		

**Part I Taxpayer Identification Number (TIN)**

Enter your TIN in the appropriate box. The TIN provided must match the name given on the "Name" line to avoid backup withholding. For individuals, this is your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I instructions on page 3. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN* on page 3.

**Note.** If the account is in more than one name, see the chart on page 4 for guidelines on whose number to enter.

<b>Social security number</b>								
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:25%; height: 20px;"> </td> <td style="width:25%; height: 20px;"> </td> <td style="width:25%; height: 20px;"> </td> <td style="width:25%; height: 20px;"> </td> </tr> <tr> <td align="center">-</td> <td align="center">-</td> <td align="center">-</td> <td align="center">-</td> </tr> </table>					-	-	-	-
-	-	-	-					
<b>Employer identification number</b>								
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:25%; height: 20px;"> </td> <td style="width:25%; height: 20px;"> </td> <td style="width:25%; height: 20px;"> </td> <td style="width:25%; height: 20px;"> </td> </tr> <tr> <td align="center">-</td> <td align="center">-</td> <td align="center">-</td> <td align="center">-</td> </tr> </table>					-	-	-	-
-	-	-	-					

**Part II Certification**

Under penalties of perjury, I certify that:

- The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me), and
- I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding, and
- I am a U.S. citizen or other U.S. person (defined below).

**Certification instructions.** You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions on page 4.

<b>Sign Here</b>	Signature of U.S. person ▶ _____	Date ▶ _____
------------------	----------------------------------	--------------

**General Instructions**

Section references are to the Internal Revenue Code unless otherwise noted.

**Purpose of Form**

A person who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) to report, for example, income paid to you, real estate transactions, mortgage interest you paid, acquisition or abandonment of secured property, cancellation of debt, or contributions you made to an IRA.

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN to the person requesting it (the requester) and, when applicable, to:

- Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
- Certify that you are not subject to backup withholding, or
- Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income.

**Note.** If a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

**Definition of a U.S. person.** For federal tax purposes, you are considered a U.S. person if you are:

- An individual who is a U.S. citizen or U.S. resident alien,
- A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States,
- An estate (other than a foreign estate), or
- A domestic trust (as defined in Regulations section 301.7701-7).

**Special rules for partnerships.** Partnerships that conduct a trade or business in the United States are generally required to pay a withholding tax on any foreign partners' share of income from such business. Further, in certain cases where a Form W-9 has not been received, a partnership is required to presume that a partner is a foreign person, and pay the withholding tax. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your U.S. status and avoid withholding on your share of partnership income.

**GENERAL SPECIFICATIONS  
PROTECTIVE JACKET AND PANTS  
FOR STRUCTURAL FIRE FIGHTING**

Owosso Fire Department

**SCOPE**

This specification details design and materials criteria to afford protection to the upper and lower body, excluding head, hands, feet, against adverse environmental effects during structural firefighting. All materials and construction shall meet or exceed NFPA Standard #1971 and OSHA for structural fire fighters protective clothing.

Comply       Exception

**OUTER SHELL MATERIAL - JACKETS AND PANTS**

The outer shell shall be constructed of TENCATE "**BLACK ADVANCE™ PCA (Producer Colored Aramid)**" 50/50 Kevlar®/Nomex® blend material with an approximate weight of 7.0 oz. per square yard. The shell material must be treated with a durable water-repellent finish that offers resistance to liquid absorption. Color of the garments shall be black. **An alternate bid of black Advance in place of the black Advance™ PCA shall not be considered.**

Comply       Exception

14

**THERMAL INSULATING LINER - JACKET AND PANTS**

The thermal liner shall be constructed of 7.8 oz. per square yard TENCATE "**DEFENDER® M SL2 (BRASS)**"; consisting of two layers of E-89™ spunlaced aramid blend, quilt stitched to a Brass colored 65% Lenzing FR Rayon, 25% Para-Aramid, and 10% Nylon (spun yarn) blended face cloth. A pocket, constructed of thermal liner over-edged to a layer of moisture barrier material, shall be affixed to the inside of the jacket thermal liner on the left side by means of a single needle stitch, the thermal liner shall be sewn to the moisture barrier and shall be independently bound around its perimeter. Further mention of "Thermal Liner" in this specification shall refer to this section.

Comply       Exception

**MOISTURE BARRIER - JACKETS AND PANTS**

The moisture barrier material shall be STEDFAST "**STEDAIR® 3000**" ePTFE moisture barrier is engineered using an E-89™ substrate and BHA Technologies ePTFE membrane. The Stedair bi-component ePTFE membrane is a combination of microporous and monolithic technologies. The moisture barrier material shall meet all moisture barrier requirements of NFPA 1971, which includes water penetration resistance, viral penetration resistance and common chemical penetration

The moisture barrier shall be sewn to the thermal liner at the edges only and bound with bias-cut neoprene-coated cotton/polyester binding. Further mention of "Specified Moisture Barrier" in this specification shall refer to this section.

Comply       Exception

**SEALED MOISTURE BARRIER SEAMS**

All moisture barrier seams shall be sealed with a minimum 1 inch wide sealing tape. One side of the tape shall be coated with a heat activated glue adhesive. The adhesive side of the tape shall be oriented toward the moisture barrier seam. The adhesive shall be activated by heat and the sealing tape shall be applied to the moisture barrier seams by means of pressure exerted by rollers for that purpose.

Comply       Exception

**METHOD OF THERMAL LINER/MOISTURE BARRIER ATTACHMENT FOR JACKETS AND PANTS**

One strip of 5/8 inch wide FR hook and loop fastener tape shall secure the moisture barrier system to the shell. In addition, a minimum of 6 snap fasteners shall secure the thermal liner/moisture barrier to the outer shell along the length of the neck line under the top most collar (see Collar section). The top most collar shall be turned under and finished such that the snaps on the collar shall not be able to contact the wearers skin. Snaps shall be protected from exterior heat by moisture barrier fabric. The remainder of the thermal liner/moisture barrier shall be secured with snap fasteners appropriately spaced on each jacket facing and snap fasteners at each sleeve end.

The thermal liner and moisture barrier shall be completely removable from the pant shell. Nine snap fasteners shall be spaced along the waistband to secure the thermal liner to the shell. The legs of the thermal liner/moisture barrier shall be secured to the shell by means of Ara-Shield® snap fasteners, 2 per leg. The Ara-shield® snap tabs shall be color coded to a corresponding color coded snap tabs in the liner for ease of matching the liner system to the outer shell after inspection or cleaning is completed.

Comply       Exception

**THERMAL PROTECTIVE PERFORMANCE**

The assembled garment, consisting of an outer shell, moisture barrier, and thermal liner, shall exhibit a TPP (Thermal Protective Performance) rating of not less than 35.

Comply       Exception

**STITCHING**

The outer shell shall be assembled using stitch type #301, #401, #514 and #516. The thermal liners and moisture barriers shall be assembled using stitch type #301, #401, #504, #514, and #516. Major A outer shell structural seams, major B structural liner seams and shall have a minimum of 8 to 10 stitches per inch. All Major A seams shall be sewn with ball point needles only. All seams shall be continuously stitched only.

Comply       Exception

**JACKET CONSTRUCTION**

**BODY**

The body of the shell and AXTION® liner system shall be constructed of three separate panels consisting of two front panels and one back panel. The body panels shall be shaped so as to provide a tailored fit thereby enhancing body movement and shall be joined together by double stitching with Nomex® thread.

Comply       Exception

**LOGOS**

The garment brand shall be identified by means of FR Nomex thread embroidery on the top of the left collar denoting "GLOBE" as the manufacturer.

\_\_\_\_\_Comply                      \_\_\_\_\_Exception

**DRAG RESCUE DEVICE (DRD)**

A Firefighter Drag Rescue Device (DRD) shall be installed in each jacket. The ends of a 1 inch wide strap, constructed of Kevlar®, shall be sewn together to form a continuous loop. The strap shall be installed in the jacket between the liner system and outer shell such that when properly installed shall loop around each arm. The strap shall be accessed through a portal between the shoulders on the upper back where it is secured in place by an FR strap. The DRD shall be removable for laundering. The access port shall be covered by an outside flap of shell material, designed to fit between the shoulder straps of an SCBA. The flap shall have a NFPA-compliant 3M Scotchlite™ reflective logo patch sewn to the outside to clearly identify the feature as the DRD (Drag Rescue Device). The DRD shall not extend beyond the outside flap. This device provides a quickly deployed means of rescuing a downed firefighter. Flimsy, rope-style DRD straps shall not be considered.

\_\_\_\_\_Comply                      \_\_\_\_\_Exception

**LINER ACCESS OPENING - JACKET**

The thermal liner and moisture barrier shall be completely removable from the jacket shell. One strip of 5/8 inch wide FR hook and loop fastener tape shall secure the thermal liner/moisture barrier to the outer shell along the length of the neckline under the collar. A minimum of 6 snap fasteners, to minimize gaps, shall secure the thermal liner/moisture barrier to the outer shell along the length of the neckline under the collar. This opening shall run the full length of the collar for the purpose of inspecting the inner surfaces of the jacket liner system. The remainder of the thermal liner/moisture barrier shall be secured with a minimum of four snap fasteners appropriately spaced on each jacket facing and four Ara-Shield® snap fasteners at each sleeve end. The outside perimeter of the AXTION® liner moisture barrier and thermal liner layers shall be bound together along the side and bottom edges with a bias-cut Neoprene coated cotton/polyester binding for a finished appearance that prevents fraying and wicking of contaminants. Stitching used to secure the thermal liner and moisture barrier in place of the Neoprene shall not be considered since stitching is not able to provide the same level of abrasion resistance.

\_\_\_\_\_Comply                      \_\_\_\_\_Exception

**SIZING**

The jacket length shall be measured from the juncture of the collar and back panel to the hem of the jacket and shall measure 29 inches long.

The jacket shall be available in even size chest measurements of two-inch increments, and shall range from a small size of 30 to a large size of 68. Generalized sizing, such as small, medium, large, etc., shall not be considered acceptable. Sizing specifically for women shall also be available.

\_\_\_\_\_Comply                      \_\_\_\_\_Exception

**RETROREFLECTIVE FLUORESCENT TRIM**

The retroreflective fluorescent trim shall be lime/yellow 3M Scotchlite™Triple Trim (L/Y borders with silver center).

Each jacket shall have an adequate amount of retroreflective fluorescent trim affixed to the outside of the outer shell to meet the requirements of NFPA #1971 and OSHA.

The trim shall be in the following widths and shall be **NYC style**; 3 inch wide stripes - around the bottom of the jacket within approximately 1 inch of the hem, around the back and chest area approximately 3 inches below the armpit, around each sleeve below the elbow, around each sleeve above the elbow.



\_\_\_\_\_Comply                      \_\_\_\_\_Exception

**REINFORCED TRIM STITCHING**

All sewn on reflective trim is secured to the outer shell with Nomex® thread, using a locking chainstitch protected by our exclusive TrimTrax® system. Developed exclusively by Globe Manufacturing Co., LLC. this strip of 3/32-inch strong, durable, flame resistant black Kevlar® cording provides a bed for the stitching along each edge of the retroreflective fluorescent trim surface and affords extra protection for the thread from abrasion. TrimTrax® has been proven to be 5 to 7 times more durable than single or even double rows of stitching, significantly reducing maintenance costs and providing more value and a longer service life. Two rows of stitching used to attach the trim in place of the TrimTrax® shall be considered an unacceptable alternative, since it has been proven that the two rows of stitching has insignificant impact on wear life. All trim ends shall be securely sewn into a seam for a clean finished appearance.

\_\_\_\_\_Comply                      \_\_\_\_\_Exception

**SEWN ON RETROREFLECTIVE LETTERING**

Each jacket shall have

3" lime/yellow 3M Scotchlite™ lettering arched on Row A reading: OWOSSO. 3" lime/yellow 3M Scotchlite lettering straight on Row C reading: FIRE

\_\_\_\_\_Comply                      \_\_\_\_\_Exception

**LETTER PATCH**

**FR Hook and Loop Letter Patch**

Lettering on extended back shall be on a FR hook and loop letter patch. The patch shall be constructed of a double layer of outer shell material. The letter patch shall attach to the back of the jacket with FR hook and loop fastener tape.

\_\_\_\_\_Comply                      \_\_\_\_\_Exception

**COLLAR & FREE HANGING THROAT TAB**

The collar shall consist of a minimum four-layer construction and be of one-piece design. There shall be two layers of a moisture barrier material sandwiched in between (see Moisture Barrier section) two layers of outer shell fabric.. The forward inside ply of moisture barrier shall be sewn to the inside of the collar at the edges only. The multi layered configuration shall provide protection from water and other hazardous elements, while maintaining thermal protection. The collar shall be a minimum of 3 inches high and graded to size. The leading edges of the collar shall extend up evenly from the leading edges of the jacket front body panels so that no gap occurs at the throat area. The collar's back layers of outershell and moisture barrier shall be joined to the body panels with a minimum of two rows of stitching. Inside the collar, above the rear seam where the collar moisture barrier is joined to the shell, there shall be a full strip of 5/8 inch wide FR hook fastener tape running the full length of the collar on the moisture barrier, and a corresponding piece of 5/8 inch wide FR loop fastener tape running the full length of the collar on the outer shell. The collar 's inside outershell and moisture barrier layer shall have 6 snap fasteners (minimum) on the lower edge of the collar. There shall be a series of corresponding snap fasteners on the thermal liner to engage the snaps

on the collar, thus enclosing the liner access opening under the shell collar. These snaps shall be installed such that they do not penetrate from the outer shell through to the inner layers. The top of the thermal liner and moisture barrier shall be sandwiched between the underside of the top collar shell fabric and moisture barrier material, and the bottom collar shell fabric and moisture barrier material so as to reduce the possibility of liner detachment while donning and doffing.

A self material fabric hanger loop shall be sewn at the top of collar.

The throat tab shall be a minimum of 4 layers, of scoop type design and constructed of two plies of outer shell material with two center plies of moisture barrier material. The throat tab shall measure not less than 3½ inches wide at the center tapering to 1½ inches at each end with a total length of approximately 8½ inches. The throat tab shall be attached to the right side of the collar by a 1 inch wide by 1½ inch long piece of Nomex® twill webbing. The throat tab shall be secured in the closed and stowed position with FR hook and loop fastener tape. The FR hook and loop fastener tape shall be oriented to prevent exposure to the environment when the throat tab is in the closed position. A 1½ inch by 3 inch piece of FR loop fastener tape shall be sewn horizontally to the inside leading end of the throat tab and a 1 inch by 3 inch piece of FR hook fastener tape shall be sewn horizontally towards the opposite end of the throat tab. A corresponding piece of FR hook fastener tape measuring 1½ inches by 3 inches shall be sewn horizontally to the leading outside edge of the collar on the left side, for attachment and adjustment when in the closed position and wearing a breathing apparatus mask. The collar closure strap shall fold in half for storage with the FR loop fastener tape engaging the FR hook fastener tape.

\_\_\_\_\_ Comply          \_\_\_\_\_ Exception

**JACKET FRONT**

The jacket shall incorporate separate facings to ensure there is no interruption in thermal or moisture protection in the front closure area. The facings shall measure approximately 2½ inches wide, extend from collar to hem, and be double stitched to the underside of the outer shell at the leading edges of the front body panels. A breathable moisture barrier material shall be sewn to the jacket facings and configured such that it is sandwiched between the jacket facing and the inside of the respective body panel. The breathable film side shall face inward to protect it. There shall be wicking barrier constructed of a moisture barrier material installed on the front closure system on the left and right side directly below the front facings to ensure continuous protection and overlap. The wicking barrier shall extend no more than a maximum of ¼ inch beyond the inner facing and false facing shall be unacceptable. The thermal liner and moisture barrier assembly shall be attached to the jacket facings by means of snap fasteners.

\_\_\_\_\_ Comply          \_\_\_\_\_ Exception

**STORM FLAP**

A rectangular storm flap measuring approximately 3 inches (6 inches for hook and dee inside/FR hook and loop fastener tape outside closure; aka #7C) wide and a minimum of 23 inches long (based on a 32 inch length jacket) shall be centered over the left and right body panels to ensure there is no interruption in thermal or moisture protection in the front of the jacket. The outside storm flap shall be constructed of two plies of outer shell material with a center ply of breathable moisture barrier material. The outside storm flap shall be double stitched to the right side body panel and shall be reinforced at the top and bottom with backtacks.

\_\_\_\_\_ Comply          \_\_\_\_\_ Exception

**STORM FLAP AND JACKET FRONT CLOSURE SYSTEM**

The jacket shall be closed by means of a 22 inch size #10 heavy duty high-temp smooth-gliding YKK Vislon® zipper on the jacket fronts and FR hook and loop fastener tape on the storm flap. The teeth of the zipper shall be mounted on black Nomex® tape and shall be sewn into the respective jacket fronts. The storm flap shall close over the left and right jacket body panels and shall be secured with FR hook and loop fastener tape. A 1½ inch by 23 inch piece of FR loop fastener tape shall be installed along the leading edge of the storm flap on the underside with four rows of stitching. A corresponding 1½ inch by 23 inch piece of FR hook fastener tape shall be sewn with four rows of stitching to the front body panel and positioned to engage the loop fastener tape when the storm flap is closed over the front of the jacket.

\_\_\_\_\_Comply          \_\_\_\_\_Exception

**CARGO EXPANSION POCKETS**

Each jacket front body panel shall have a 2 inch deep by 10 inch wide by 6 inch high expansion pocket double stitched to the shell and shall be located such that the bottom of the pockets are at the bottom of the jacket for full functionality when used with an SCBA. Retroreflective trim shall run over the bottom of the pockets so as not to interrupt the trim stripe. Two rust resistant metal drain eyelets shall be installed in the bottom of each expansion pocket to facilitate drainage of water. *The lower half of the pocket shall be reinforced with a layer of Kevlar® material on the inside.* The pocket flaps shall be rectangular in shape, constructed of two layers of outer shell material and shall measure approximately 3 inches deeper than the pocket expansion and ½ inch wider than the pocket. The pocket flaps shall be closed by means of FR hook and loop fastener tape. Two pieces of 1½ inch by 3 inch FR hook fastener tape shall be installed vertically on the inside of each pocket flap (one piece on each end). Two corresponding pieces of 1½ inch by 3 inch FR loop fastener tape shall be installed horizontally on the outside of each pocket near the top (one piece on each end) and positioned to engage the hook fastener tape.

**(lower pockets to hem)** Retroreflective trim shall run over the bottom of the pockets so as not to interrupt the trim stripe.

\_\_\_\_\_Comply          \_\_\_\_\_Exception

**EXPANSION POCKET REINFORCEMENTS**

The lower half of the expansion pockets shall be reinforced on the outside with a layer of black Dragonhide® material.

19

\_\_\_\_\_Comply          \_\_\_\_\_Exception

**SLEEVES**

The sleeves shall be of two-panel construction, contoured, drop shoulder design. The outer and under sleeve panels shall be double stitched together with Nomex® thread. The sleeves shall be contoured (curved) to follow the natural shape of the human arm unlike straight, tubular sleeve configurations. The drop shoulder design, along with the contoured sleeves shall provide for a high degree of uninhibited arm and shoulder movement. The same contoured, drop shoulder design shall be used in all layers of the garment (shell, moisture barrier, and thermal liner).

\_\_\_\_\_Comply          \_\_\_\_\_Exception

**SLEEVE CUFF REINFORCEMENTS**

The sleeve cuffs shall be reinforced with a layer of black Dragonhide® material.

The cuff reinforcements shall not be less than 2 inch in width and folded in half, approximately one half inside and one half outside the sleeve end for greater strength and abrasion resistance. The cuff reinforcement shall be double stitched to the sleeve end; a single row of stitching shall be considered unacceptable. This independent cuff provides an additional layer of protection as compared to a turned and stitched cuff. Jackets finished with a turned and stitched cuff do not provide the same level of abrasion resistance and shall be considered unacceptable.

\_\_\_\_\_Comply          \_\_\_\_\_Exception

**WRISTLETS / SLEEVE WELLS**

Each jacket shall be equipped with

**Nomex® knit wristlets with thumb loop** not less than 4 inches in length and of double thickness. Nomex® knit is constructed of 96% Nomex® and 4% Spandex for shape retention. A loop of ½ inch wide black 6.0 oz. Brigade material shall be installed on each wristlet. This loop is designed to slip over the thumb and hold the wristlets from riding up the arm. The color of the wristlets shall be grey.

The wristlets shall be sewn to flame resistant neoprene coated cotton/polyester material, which in turn shall be sewn to the inside of the sleeve shell approximately five inches from the sleeve cuff. This sleeve well configuration serves to prevent water and other hazardous elements from entering the sleeves when the arms are raised. The neoprene material shall also line the inside of the sleeve shell from the cuff to a point approximately five inches up, where it joins the sleeve well and is double stitched to the shell. Four Ara-shield® snap tabs shall be sewn into the juncture of the sleeve well and wristlet. The tabs shall be spaced equidistant from each other and shall be fitted with female snap fasteners to accommodate corresponding male snaps in the liner sleeves. One of the Ara-shield® snap tabs shall be a different color in the liner to correspond with color coded snap tabs for ease of matching the liner system to the outer shell after inspection or cleaning is completed. This configuration shall ensure there is no interruption in protection between the sleeve liner and wristlet.

\_\_\_\_\_ Comply          \_\_\_\_\_ Exception

**TAKE UP STRAPS**

The jacket shall have postman style take up straps sewn onto the sides just above the back half of the expansion pockets.

\_\_\_\_\_ Comply          \_\_\_\_\_ Exception

20

**LINER SHOULDER THERMAL ENHANCEMENT**

A minimum of one additional layer of thermal liner material shall be used to increase thermal insulation in the shoulder area of the liner system. This thermal enhancement layer shall drape over the top of each shoulder extending from the collar to the sleeve/shoulder seam, down the front a minimum 2 inches from the juncture of the collar down the back to a depth of a minimum of 2 inches to provide greater CCHR protection in this high compression area. The thermal enhancement layer shall have finished edges by means of overedging. Raw or unfinished edges shall be considered unacceptable. Thermal scraps shall not be substituted for full-cut fabric padding. Smaller CCHR reinforcements shall not be considered acceptable since they provide far less area of coverage.

\_\_\_\_\_ Comply          \_\_\_\_\_ Exception

**RADIO POCKET**

Each jacket shall have a pocket designed for the storage of a portable radio. This pocket shall be of box type construction, double stitched to the jacket and shall have one drainage eyelet in the bottom of the pocket. The pocket flap shall be constructed of two layers of outer shell material measuring approximately 3 inches longer than the depth of the pocket and ¼ inch wider than the pocket. The pocket flap shall be closed by means of FR hook and loop fastener tape. A 1½ inch by 3 inch piece of FR hook fastener tape shall be installed on the inside of the pocket flap beginning at the center of the bottom of the flap. A 1½ inch by 3 inch piece of FR loop fastener tape shall be installed horizontally on the outside of the pocket near the top center and positioned to engage the hook fastener tape. In addition, the entire inside of the pocket shall be lined with neoprene coated cotton/polyester material to ensure that the radio is protected from the elements. The impermeable barrier material shall also be sandwiched between the two layers of outer shell material in the pocket flap for added protection. The radio pocket shall measure approximately 2 inches deep by 3.5 inches wide by 8 inches high and shall be installed on the left chest.

\_\_\_\_\_ Comply          \_\_\_\_\_ Exception

**NOTCHED RADIO POCKET FLAP**

The radio pocket flap shall be notched to accommodate the radio antenna on the both sides for a dual antenna notch.

\_\_\_\_\_ Comply      \_\_\_\_\_ Exception

**MICROPHONE STRAP**

A strap shall be constructed to hold a microphone for a portable radio. It shall be sewn to the jacket at the ends only. The size of the microphone strap shall be 1 inch x 3 inches.

The microphone strap shall be mounted above the radio pocket and shall be constructed of double layer outer shell material.

\_\_\_\_\_ Comply      \_\_\_\_\_ Exception

**SURVIVOR FLASHLIGHT HOLDER**

Each jacket shall be equipped with a "Survivor" flashlight holder. An inward facing safety hook, attached to a double layer self material strap, shall be double stitched in a vertical position to the upper chest. The inward facing safety hook shall accommodate the clip portion of the flashlight. Below the safety hook shall be a strap constructed of outer shell material measuring approximately 1 ¾ inches high and 9 inches wide, and shall hold the barrel of the flashlight. The lower strap shall be equipped with a 1 ½ inch by 2 ½ inch FR hook and loop closure at the front of the strap to facilitate easy removal of the flashlight. There shall be approximately 3 ½ inches between the upper safety hook and lower strap. The "Survivor" flashlight holder shall be sewn to the jacket on the right chest.

\_\_\_\_\_ Comply      \_\_\_\_\_ Exception

**EMBROIDERED AMERICAN FLAG – RIGHT SLEEVE**

Each jacket shall have a Nomex® embroidered American flag that measures approximately 2½ inches high by 3½ inches wide. Per Military protocol the field of stars shall be to the top right corner for installation on the right sleeve. Flags made of fabric other than Nomex® shall be considered unacceptable.

\_\_\_\_\_ Comply      \_\_\_\_\_ Exception

**EXTENDED BACK (EB)**

The hem of the jacket and liner system shall be constructed with EXTENDED BACK (EB) panels incorporating all 3-layers of the system. The outer shell EB shall be constructed of two layers of specified outer shell material, double stitched to the hem. The liner EB shall be constructed with one layer each of specified thermal liner and moisture barrier materials, serge stitched to the liner hem. There shall be two Ara-Shield® snap tabs sewn to the bottom of the shell portion of the EB which shall attach to corresponding snaps on the liner portion of the EB. The EB shall extend approximately 6 inches lower in the back than the front of the jacket providing and maintaining proper overlap when bending or crawling.

3" lime/yellow 3M Scotchlite™ trim installed along the bottom of the EB allowing room for lettering above the trim at the top of the EB.

\_\_\_\_\_Comply \_\_\_\_\_Exception

## **PANT CONSTRUCTION**

### **BODY**

The body of the shell shall be constructed of four separate body panels consisting of two front panels and two back panels. The body panels shall be shaped so as to provide a tailored fit, thereby enhancing body movement, and shall be joined together by double stitching with Nomex® thread. The body panels and seam lengths shall be graded to size to assure accurate fit in a broad range of sizes.

\_\_\_\_\_Comply \_\_\_\_\_Exception

### **LINER ACCESS OPENING (PANT)**

The thermal liner and moisture barrier layers of the pant liner system shall be constructed in such a way as to allow an access opening for interior inspection, service and replacement. The thermal liner and moisture barrier layers shall be stitched together for security and prevention of inadvertent use of one layer without the other. The liner system shall be reinforced at the base of the crotch by means of a strip of additional material measuring approximately ¾ inches wide by 3 inches long. This reinforcing material shall be secured by the binding tape at the bottom of the fly opening, straddling the crotch seam. This reinforcement shall serve to prevent the liner from tearing in this high stress area, as a result of the constant donning and doffing of the pants.

The liner system of the pant shall incorporate an opening along the back of the waistline for ease in inspecting the inner layers and to facilitate performing the complete Liner Inspection. The thermal liner and moisture barrier shall be individually bound with a neoprene coated bias cut tape and joined together on each of the front panels, along the waistband from the front fly opening to side seam. The back of the liner system shall be allowed to remain open with two snaps on either side of the back seam to attach the moisture barrier layer to the thermal liner layer. As described previously, the pant thermal layer system snaps directly to the independent waistband by means of nine snap fasteners. There shall be no hook and loop used to close the liner access opening.

\_\_\_\_\_Comply \_\_\_\_\_Exception

### **SIZING**

The pants shall be available in even size waist measurements of two inch increments and shall be available in a range of sizes from 24 to 68. The pant inseam measurement shall be available in two inch increments. Generalized sizing, such as small, medium, large, etc., shall not be considered acceptable. Sizing specifically for women shall also be available.

\_\_\_\_\_Comply \_\_\_\_\_Exception

### **RETROREFLECTIVE FLUORESCENT TRIM**

The pants shall have a stripe of retroreflective fluorescent trim encircling each leg below the knee to comply with the requirements of NFPA #1971 in 3 inch lime/yellow 3M Scotchlite™ Triple Trim (L/Y borders with silver center).

Bottom of trim band shall be located approximately 3" above cuff.

\_\_\_\_\_Comply \_\_\_\_\_Exception

### **REINFORCED TRIM STITCHING**

All sewn on reflective trim is secured to the outer shell with Nomex® thread, using a locking chainstitch protected by

our exclusive TrimTrax® system. Developed exclusively by Globe Manufacturing Co., LLC. this strip of 3/32-inch strong, durable, flame resistant black Kevlar® cording provides a bed for the stitching along each edge of the retroreflective fluorescent trim surface and affords extra protection for the thread from abrasion. TrimTrax® has been proven to be 5 to 7 times more durable than single or even double rows of stitching, significantly reducing maintenance costs and providing more value and a longer service life. Two rows of stitching used to attach the trim in place of the TrimTrax® shall be considered an unacceptable alternative, since it has been proven that the two rows of stitching has insignificant impact on wear life. All trim ends shall be securely sewn into a seam for a clean finished appearance.

\_\_\_\_\_Comply                      \_\_\_\_\_Exception

**WAISTBAND**

The waist area of the pants shall be reinforced on the inside with a separate piece of black aramid outer shell material, cut on the bias (diagonally). The reinforcement shall be folded in half, for a finished bottom edge and shall have a finished width of not less than approximately 1½ inches. The top edge of the waistband reinforcement shall be double stitched to the outer shell at the top of the pants. The lower edge of the waistband shall be unattached to the shell to accept the thermal liner and moisture barrier. The top of the thermal liner and moisture barrier shall be secured to the underside of the waistband reinforcement by means of nine snaps, spaced equidistant along the length of the waistband reinforcement. Inserting the liner system between the waistband reinforcement and outer shell serves to reduce the possibility of liner detachment while donning and doffing. The independent waistband construction affords greater comfort and fit than a turned and stitched method. Pants that do not include an independent waistband or are not cut on the bias shall not provide the same amount of stretch to the garment and shall be considered unacceptable.

\_\_\_\_\_Comply                      \_\_\_\_\_Exception

**TAKE UP STRAPS**

23

The pants shall be equipped with two take up straps. The straps shall be constructed of approximate 1 inch wide black Aramid twill and be positioned in the waist area on the outside of the garment; one on each side. Each take up strap shall be comprised of two sub-component straps and one pull-tab. The rear strap component shall be constructed of black Aramid twill. The rear strap shall measure 1 inch wide and approximately 5 inches long and shall be folded back to form a loop which shall hold a high-temp thermoplastic slide fastener. The slide fastener shall point toward the front. The opposite end of the strap shall be stitched to the pants with two rows of double-needle stitching. The front strap component shall measure approximately 1 inch wide by approximately 10 inches long. One end shall be folded back on itself to form a loop and the high-temp thermoplastic slide fastener from the other strap shall be captured within the loop. The opposite end of the front strap component shall be inserted through a high-temp thermoplastic buckle forming a loop and double-needle stitched to itself to secure the buckle in place. The opposite end shall be inserted through the buckle and shall be stitched to the pants with two rows of double-needle stitching. An approximate 1 inch by 1 ¾ inch black Aramid pull tab shall be secured to the buckle. The pull-tab shall be constructed of approximate 1 inch by approximately 4 inch black Aramid twill shall be looped through the opposite end of the buckle, folded in half and double-needle stitched to itself just below the buckle and at the opposite end. The take up strap pull-tabs shall pull toward the front to allow for adjustment. The overall finished length of the take up strap shall measure approximately 9 inches.

\_\_\_\_\_Comply                      \_\_\_\_\_Exception

**PANT CLOSURE SYSTEM**

The exterior primary positive locking closure shall be an inward facing metal safety hook and dee ring. The safety hook shall be threaded through an Ara-Shield® material strap. The strap shall measure a total of approximately 10 inches and shall be folded in half to create a double layer strap for the safety hook to be threaded through. The double layer strap shall be folded in half and stitched to the waist area using three heavy duty bar tacks, for a finished strap length of approximately 2 ½ inches. A dee ring shall be riveted to the leading edge of the fly flap near the top. The snap hook shall engage the dee ring located on the fly flap when in the closed position.

The internal fly flap closure shall consist of 1½ inch wide by full-length FR hook and loop fastener tape. The FR loop portion shall be sewn with four rows of stitching to the inside of the leading edge of the external fly flap. The corresponding portion of FR hook fastener tape shall be sewn with four rows of stitching to the right front body panel positioned to engage the loop portion when the external fly flap is in the closed position.

\_\_\_\_\_Comply                      \_\_\_\_\_Exception

**EXTERNAL / INTERNAL FLY FLAP**

The pants shall have a vertical outside fly flap constructed of two layers of outer shell material, with a layer of moisture barrier material sandwiched between. The fly flap shall be double stitched to the left front body panel and shall measure approximately 2 ¾ inches wide, with a length graded to size based on waist measurement and reinforced with bartacks at the base. An internal fly flap constructed of one layer of outer shell material, thermal liner and specified moisture barrier, measuring approximately 2 inches wide, with a length graded to size based on waist, shall be sewn to the leading edge of the right front body panel. The inside of the right front body panel shall be thermally enhanced directly under the outside fly with a layer of moisture barrier and thermal liner material.

The underside of the outside fly flap shall have a 1½ inch wide piece of FR loop fastener tape quadruple stitched along the full length and through the shell material only; stitching shall not penetrate the moisture barrier insert between the two layers to insure greater thermal protection and reduced water penetration. A corresponding strip of 1½ inch wide piece of FR hook fastener tape shall be quadruple stitched to the outside right front body panel securing the fly in a closed position.

Appropriate snap fastener halves shall be installed at the leading edge of the waistband for the purpose of further securing the pants in the closed position.

\_\_\_\_\_Comply                      \_\_\_\_\_Exception

**LINER KNEE THERMAL ENHANCEMENT**

A minimum of one additional layer of specified thermal liner and one additional layer of moisture barrier material, measuring a minimum of 7 inches by 10 inches, shall be sewn to the knee area of the liner system for added CCHR protection and increased thermal insulation in this high compression area. The knee thermal enhancement layers shall be sandwiched between the thermal liner and moisture barrier layers of the liner system and shall be stitched to the thermal liner layer only. The thermal enhancement layer shall have finished edges by means of overedging.

Raw or unfinished edges shall be considered unacceptable. Thermal scraps shall not be substituted for full-cut fabric padding. Smaller CCHR reinforcements shall not be considered acceptable since they provide far less area of coverage.

\_\_\_\_\_Comply                      \_\_\_\_\_Exception

**KNEE REINFORCEMENTS**

The knee area shall be reinforced with a layer of black Dragonhide® material.

The knee reinforcement shall be centered on the leg to insure proper coverage when bending, kneeling and crawling. The knee reinforcements shall measure approximately 9 inches wide by 12 inches high and shall be double stitched to the outside of the outer shell in the knee area for greater strength and abrasion resistance. Knee reinforcements of a smaller size do not provide the same protective coverage and shall be considered unacceptable. The knee reinforcement specified shall be removable for replacement without opening Major A seams of the outer shell of the pant.



\_\_\_\_\_Comply                      \_\_\_\_\_Exception

**PADDING UNDER KNEE REINFORCEMENTS**

Padding for the knees shall be accomplished with one layer of flame resistant neoprene coated cotton/poly material and one layer of quilted aramid batt. Both layers of padding shall be sandwiched between the shell and the knee reinforcement layers.

\_\_\_\_\_Comply                      \_\_\_\_\_Exception

**EXPANSION POCKETS**

An expansion pocket, measuring approximately 2 inches deep by 10 inches wide by 10 inches high shall be double stitched to the side of each leg straddling the out-seam above the knee and positioned to provide accessibility. *The lower half of each expansion pocket shall be reinforced with a layer of Kevlar® material on the inside.* Two rust resistant metal drain eyelets shall be installed on the underside of each expansion pocket to facilitate drainage of water. The pocket flaps shall be rectangular in shape, constructed of two layers of outer shell material and shall measure approximately 3 inches deeper than the pocket expansion and ½ inch wider than the pocket. The pocket flaps shall be closed by means of FR hook and loop fastener tape. Two pieces of 1½ inch by 3 inch FR hook fastener tape shall be installed vertically on the inside of each pocket flap (one piece on each end). Two corresponding pieces of 1½ inch by 3 inch FR loop fastener tape shall be installed horizontally on the outside of each pocket near the top (one piece on each end) and positioned to engage the hook fastener tape.

\_\_\_\_\_Comply                      \_\_\_\_\_Exception

**EXPANSION POCKET REINFORCEMENTS**

The lower half of the expansion pockets shall be reinforced on the outside with a layer of black Dragonhide® material.

\_\_\_\_\_Comply                      \_\_\_\_\_Exception

**PANT CUFF REINFORCEMENTS**

The cuff area of the pants shall be reinforced with a layer of black Dragonhide® material

The cuff reinforcement shall not be less than 2 inch in width and folded in half, approximately one half inside and one half outside the end of the legs for greater strength and abrasion resistance. The cuff reinforcement shall be double stitched to the outer shell for a minimum of two rows of stitching. This independent cuff provides an additional layer of protection over a hemmed cuff. Pants that are turned and stitched at the cuff, as opposed to an independent cuff reinforcement, do not provide the same level of abrasion resistance and shall be considered unacceptable.

\_\_\_\_\_Comply                      \_\_\_\_\_Exception

**PADDED RIP-CORD SUSPENDERS & ATTACHMENT**

On the inside waistband shall be attachments for the standard "H" style "Padded Rip-Cord" suspenders. There shall be four attachments total – 2 front, 2 back. The suspender attachments shall be constructed of black Ara-Shield® material measuring approximately ½ inch wide by 3-inches long. They shall be sewn in a horizontal position on the ends only to form a loop. The appearance shall be much like a horizontal belt loop to capture the suspender ends.

A pair of "H" style "Padded Rip-Cord" suspenders shall be specially configured for use with the pants. The main body of the suspenders shall be constructed of 2 inch wide black webbing straps. The suspenders shall run over each shoulder to a point approximately shoulder blade high on the back, where they shall be joined by a 2 inch wide horizontal piece of webbing measuring approximately 8-inches long, forming the "H". This shall prevent the suspenders from slipping off the shoulders. The shoulder area of the suspenders shall be padded for comfort by fully encasing the webbing with aramid batting and wrap-around black aramid.

The rear ends of the suspenders shall be sewn to 2-inch wide elasticized webbing extensions measuring approximately 8-inches in length and terminating with thermoplastic loops. The forward ends of the suspender straps shall be equipped with specially configured black powder coat non-slip metal slides with teeth. Through the metal slides shall be the 9 inch lengths of strap webbing "Rip-Cords" terminating with thermoplastic loops on each end. Pulling on the "Rip-Cords" shall allow for quick adjustment of the suspenders.

Threaded through and attached to the thermoplastic loops on the forward and rear ends of the suspenders shall be black aramid suspender attachments incorporating two snap fasteners. The aramid suspender attachments are to be threaded through the suspender attachment loops on the inside waistband of the pants. The aramid suspender attachments shall then fold over and attach to themselves securing the suspender to the pants.

\_\_\_\_\_ Comply                      \_\_\_\_\_ Exception

**REVERSE BOOT CUT**

The outer shell pant leg cuffs shall be constructed such that the back of the leg is approximately 1 inch shorter than the front. The liner shall also have a reverse boot cut at the rear of the cuff and a concave cut at the front to keep the liner from hanging below the shell. This construction feature shall minimize the chance of premature wear of the cuffs and injuries due to falls as a result of "walking" on the pant cuffs. Pants that have "cut-outs" in the back panel rather than a contoured boot cut shall be considered unacceptable.

\_\_\_\_\_ Comply                      \_\_\_\_\_ Exception

**DEALER SUPPORT**

The awarded dealer shall be based in the state of Michigan. Out of state distributors shall not be considered acceptable.

\_\_\_\_\_ Comply                      \_\_\_\_\_ Exception

**THIRD PARTY TESTING AND LISTING PROGRAM**

All components used in the construction of these garments shall be tested for compliance to NFPA Standard #1971 by Underwriters Laboratories (UL). Underwriters Laboratories shall certify and list compliance to that standard. Such certification shall be denoted by the Underwriters Laboratories certification mark.

\_\_\_\_\_ Comply                      \_\_\_\_\_ Exception

**LABELS**

Appropriate warning label(s) shall be permanently affixed to each garment. Additionally, the NFPA certification label shall include the following information.

- Compliance to NFPA Standard #1971
- Underwriters Laboratories classified mark
- Manufacturer's name
- Manufacturer's address
- Manufacturer's garment identification number
- Date of manufacture

Size

\_\_\_\_\_ Comply                      \_\_\_\_\_ Exception

**ISO CERTIFICATION / REGISTRATION**

The protective clothing manufacturer shall be certified and registered to ISO Standard 9001 to assure a satisfactory level of quality. Indicate below whether the manufacturer is so certified and registered by checking either "Yes" or "No" in the space provided.

\_\_\_\_\_ Yes                      \_\_\_\_\_ No

**WARRANTY**

The manufacturer shall warrant these jackets and pants to be free from defects in materials and workmanship for their serviceable life when properly used and cared for.

\_\_\_\_\_ Comply                      \_\_\_\_\_ Exception

**HOOK AND LOOP SUPPORT PROGRAM**

Support program shall cover hook or loop tape that has begun to fray or otherwise degrade from normal wear. This program shall remain in effect for a period of five years from the original date of manufacture of the garment. This support program shall cover the repair or replacement, without charge, of any hook and/or loop on the garments produced by the manufacturer providing the garments are otherwise serviceable.

This support program does NOT cover damage from fire, heat, chemicals, misuse, accident or negligence. Failure to properly care for garments shall serve to void this support program.

\_\_\_\_\_ Comply                      \_\_\_\_\_ Exception

**SIZING BY VENDOR**

Both male and female sizing samples shall be available.

Both male and female sizing samples shall be on hand for use when sizing. The vendor shall be available to perform all sizing requirements within 96 hours of written notice. Measuring with a tape measure is not acceptable.

\_\_\_\_\_ Comply                      \_\_\_\_\_ Exception

**GARMENT TRAINING AND SUPPORT**

OSHA requires employees be trained on the capabilities and limitations of their Personal Protective Equipment. The selected vendor shall provide the following:

On-site care and maintenance training shall be provided by the manufacturer. Training shall be in compliance with NFPA 1851, current edition, at the conclusion of which each participant shall receive a certificate of completion.

An on-site OSHA mandated training class on the Knowing the Limits of Your PPE shall be provided at no charge. The training shall include structural firefighting coat, pant and boots.

\_\_\_\_\_ Comply                      \_\_\_\_\_ Exception

**BAR-CODE/RECORD KEEPING INTERFACE**

A 1 dimensional barcode, in the interleaved 2 of 5 format shall be printed on the label of each separable layer of the garment.

This barcode shall represent the serial number of the garment. The manufacturer shall be able to provide a detailed list of each asset of a drop-shipped order, and shall include the following:

- Brand
- Order Number
- Serial Number
- Style Number
- Color
- Description
- Chest/Waist Size
- Jacket/pant Length
- Sleeve Length
- Date of Manufacture
- Mark-For Data

This information shall be able to be imported into the manufacturers web-based system designed to facilitate the organization and tracking of assets in accordance with the cleaning and inspection requirements of OSHA and NFPA 1851.

\_\_\_\_\_Comply      \_\_\_\_\_Exception

**EXCEPTIONS TO SPECIFICATIONS**

Any and all exceptions to the above specifications must be clearly stated for each heading. Use additional pages for exceptions, if necessary.

**COUNTRY OF ORIGIN**

Jackets and Pants shall be manufactured in the United States.

